

Lysander & Theo E Button

Impt in Steam Pump

No. 119,314.

Patented Sep. 26, 1871.

Fig. 1

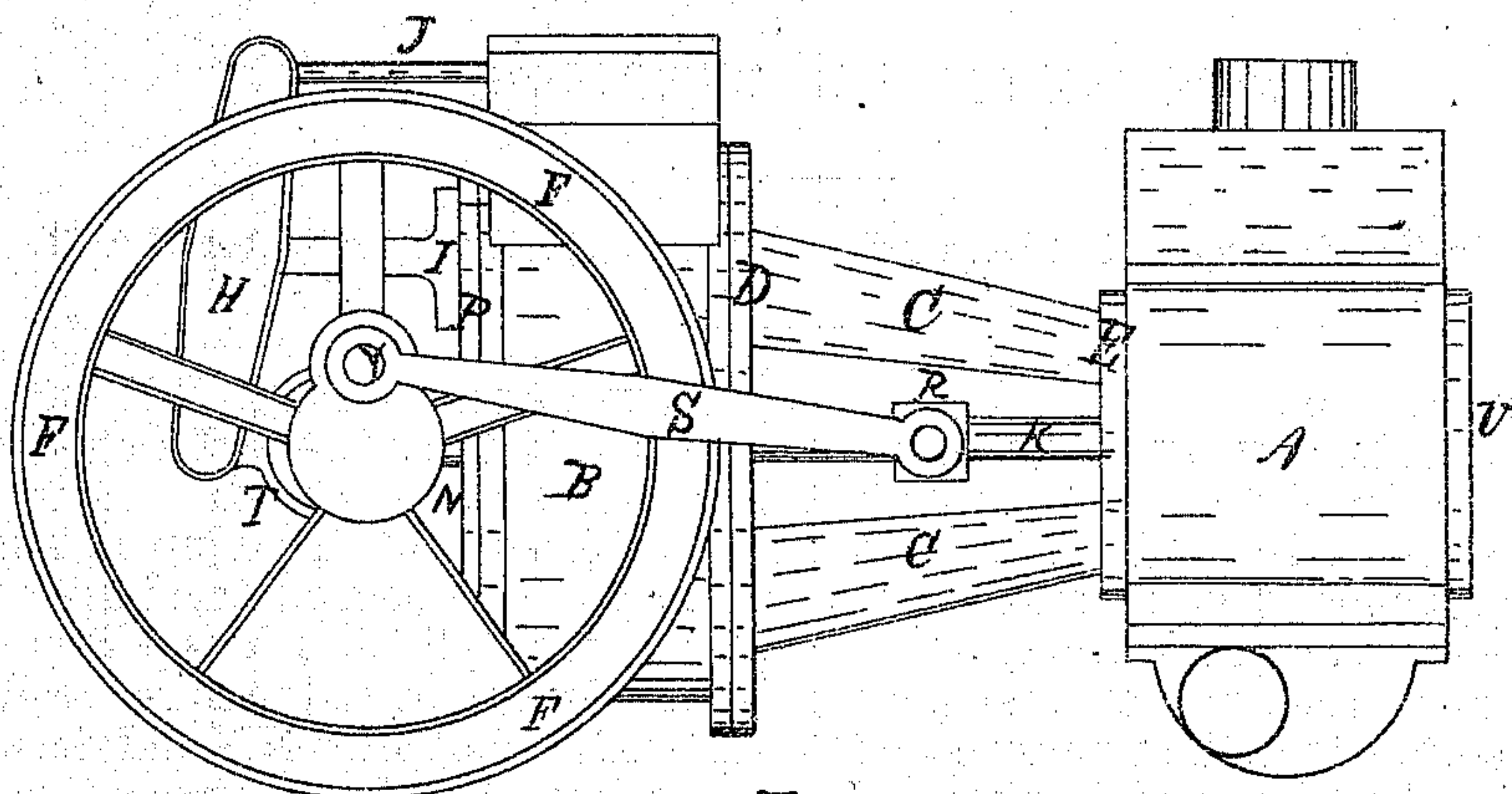


Fig. 2.

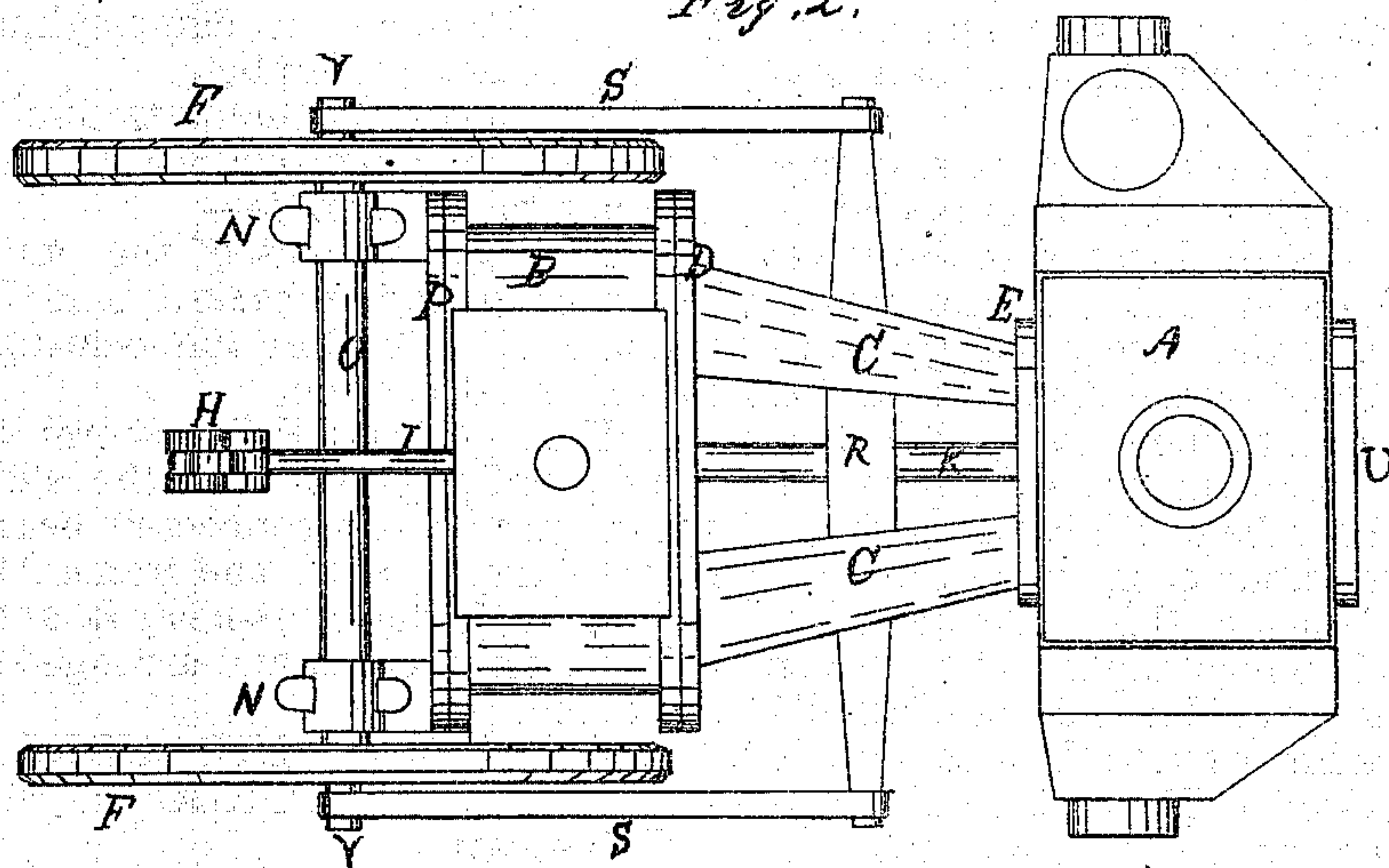
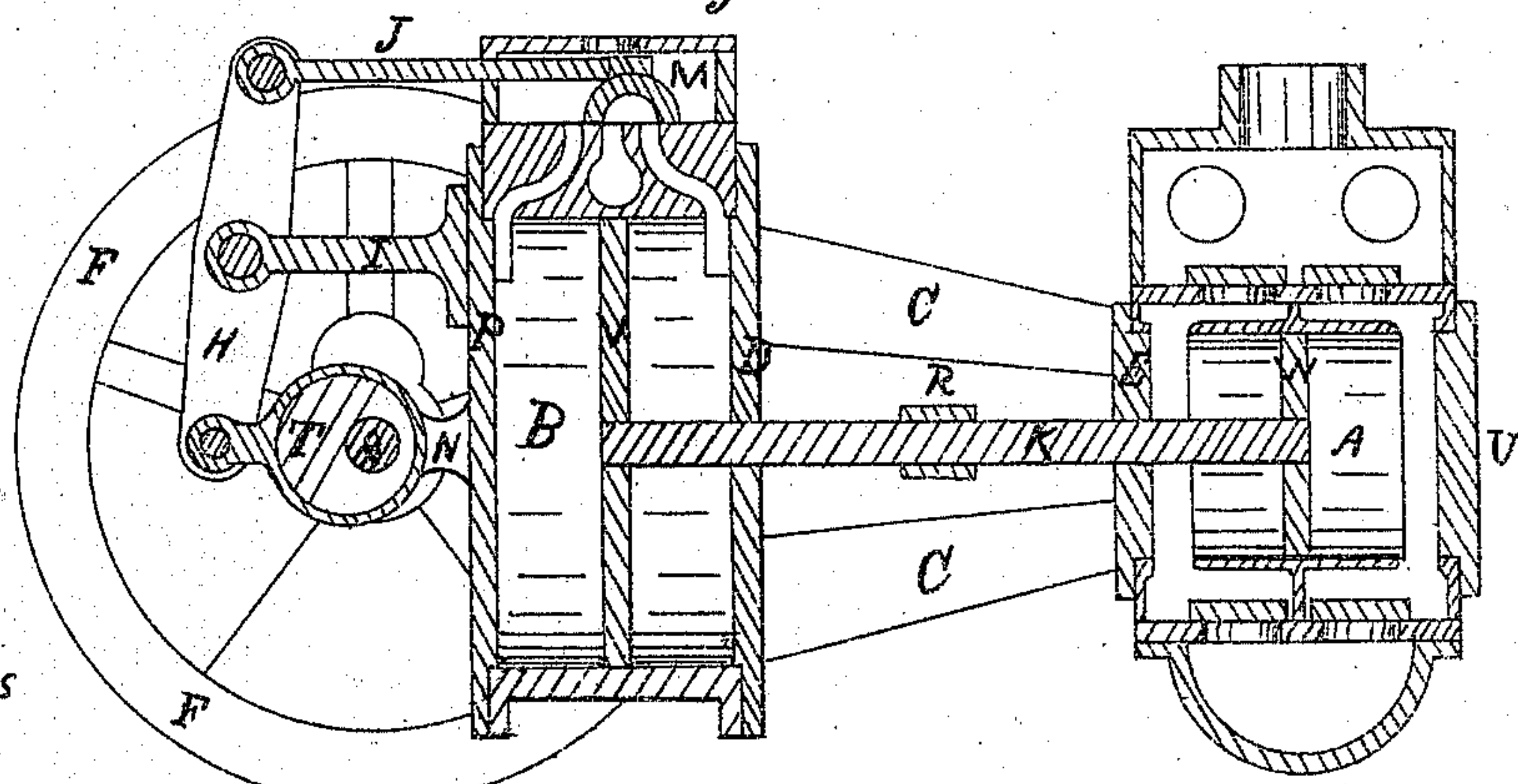


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

LYSANDER BUTTON AND THEO. E. BUTTON, OF WATERFORD, NEW YORK.

IMPROVEMENT IN STEAM-PUMPS.

Specification forming part of Letters Patent No. 119,314, dated September 26, 1871.

To all whom it may concern:

Be it known that we, LYSANDER BUTTON and THEO. E. BUTTON, of Waterford, in the county of Saratoga and State of New York, have invented certain Improvements in Steam-Pumps, of which the following is a specification:

Our object is to so arrange the several parts composing the invention that the utmost economy of space and weight of material, with such distribution of parts as will insure a maximum of strength and the greatest efficiency of operation, shall be attained.

Figure 1 is a side elevation of a steam-pump embodying our invention. Fig. 2 is a plan of the same. Fig. 3 is a vertical section of the same.

A is the pump-cylinder and B is the steam-cylinder, in which slide the closely-fitting pistons V W, directly connected by the piston-rod K. R is a cross-head secured to the piston-rod K, and connected, by the connecting-rods S S, to the crank-pins Y Y in the hubs of the balance-wheels F F, which are keyed upon each end of the shaft O revolving in the bearings N N. T is an eccentric upon the shaft O, which imparts to the lower end of the walking-beam H a reciprocating motion, which is in turn imparted to the steam-valve M through the valve-rod J. I is the standard upon which the walking-beam vibrates. The steam-cylinder head D and the pump-cylinder head E, together with the braces or frame C C, are cast in one

piece, while the bearings N N and the standard I are cast in one piece with or securely bolted to the steam-cylinder head P. Both cylinders being bored out and faced up in a lathe, and the heads D and E being turned upon the centers of a lathe, the cylinders A and B must be exactly "in line" when bolted to these heads. The same is true of the bearings N N and the standard I upon the head P. It is obvious that the bearings N N may be upon the pump-cylinder head U if for any reason preferable.

We claim none of the parts composing our improved pump taken separately; but

What we do claim is—

1. The arrangement of the pump-cylinder A E U, the connecting-frame or bars C C, the steam-cylinder B D P, and the bearings I N N, as shown and described.

2. The fly-wheels F F and crank-shaft, eccentric T, walking-beam H, the slide-valve, the steam-cylinder and connected bearings I and N N, the pump-cylinder and frame C C, the pistons V W, rod K, the cross-head R, and connecting-rods, all constructed and arranged as shown and described.

LYSANDER BUTTON.
THEO. E. BUTTON.

Witnesses:

WM. M. DONALD,
C. R. BUTTON.